

ABSTRACT

Novel compositions and methods of using those compositions to form metal oxide films or coatings are provided. The compositions comprise an organometallic oligomer and an organic polymer or oligomer dispersed or dissolved in a solvent system. The compositions have long shelf lives and can be prepared by easy and reliable preparation procedures. The compositions can be cured to cause conversion of the composition into films of metal oxide interdispersed with organic polymer or oligomer. The cured films have high refractive indices, high optical clarities, and good mechanical stabilities at film thicknesses of greater than about 1 μm .